

volving census enumeration in mostly "illiterate" populations. However, it would have been interesting to possibly present digit preferences in the stated ages since a number of techniques and a computer program have been developed for the study of such phenomena.²

TABLE 1—Theoretical Data Set

Sample points	Mean	S.D.
0 2 0 5 2	1.80	2.05
5 1 5 0 1	2.40	2.41
6 0 1 9 1	3.40	3.91

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Drs. Bairagi and Edmonston Respond

Aiyomamitis has correctly mentioned mistakes in our definition of the coefficient of variation and in one of our particular interpretations of the standard deviation and amount of bias in age error. These two mistakes, however, are confined to the description of the data—the data themselves are correct—and have little effect on the key findings and main conclusion of the paper.

The negative correlation between the "true" anthropometric indexes and age error is an important finding in the field of using anthropometric measures for investigating the nutritional status of children. A negative correlation will certainly result in the misclassification of some well-nourished children as malnourished and some malnourished children as well-nourished. We find no reason mentioned by Aiyomamitis that indicates the need to alter our interpretation of this negative correlation. For readers seeking additional interpretation on this aspect of age error, our earlier paper offers considerable demographic analysis.¹

We define age error as actual age minus reported age (see footnote in Table

1 of our paper) and used this definition consistently in the paper. In our terminology, "reported relatively older" implies lower age error values (including negative values) and "reported relatively younger" means higher age error values. This is the opposite interpretation offered by Aiyomamitis which, however, is not consistent with the data and interpretations in our paper.

Our paper did not review demographic studies about age digit preferences in Bengali-language populations, although several studies are available. Edmonston and Bairagi give a detailed historical review of age misstatement and digit preference, along with cited sources, for Bengali populations.² That 1981 paper also presents data on digit preference for 1881 to 1974 from various censuses and surveys in West Bengal, India, and Bangladesh.

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Interpretation of Spermicide Study Data

We are concerned by the way our comments on spermicides and chromosomal anomalies have been used in the debate over confidence intervals in your journal.¹ One sentence from our paper¹ has been taken out of context and misinterpreted. We believe that Mr. Poole's observations² and Dr. Thompson's³ charges that our statement was "fallacious," "inappropriate" and "misleading" are the result of their failure to look at the entire discussion.

Our observation that recall bias may have caused the higher rate of spermicide use reported in the Down's group was based on biological evidence from other studies that did not confirm the reported association. This point is clearly made in our next sentence: "Our previous study and others have demonstrated no increased risk of any

single malformation in infants of spermicide users." We suggested recall bias as an explanation for Dr. Rothman's results based primarily on findings from our own and other investigations, not the confidence intervals. It is most unfortunate that these commentators failed to consider our observations in the proper perspective.

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Mr. Poole's Response

In response to Dr. Mills' accusation that I misleadingly quoted¹ a paper by Mills, et al,² out of context, here is the complete excerpt in question:

"[In Rothman's study,³] spermicide use was significantly more common only when Down's cases were compared with normal control subjects, not other malformed infants. This suggests that recall bias may have caused the higher rate of spermicide exposure reported in the Down's group. Our previous study and others demonstrated no increased risk of any single malformation in infants of spermicide users.⁴⁻⁶"]

I quoted the first two of these three sentences as a good example of how not to interpret confidence intervals. It did not, and does not, occur to me that the authors intended the word "this" at the beginning of the second sentence to refer to the observation in the third sentence.

As we seek proper perspective from the third sentence, we encounter ambiguity. Did these studies demonstrate that the risk of every malformation is not increased or did they simply not demonstrate that the risk of any malformation is increased?

Mills, et al,⁴ did not even mention Down syndrome and reported only three exposed cases of all chromosomal abnormalities. Shapiro, et al,⁵ reported a prevalence odds ratio (POR) of 1.8 for Down syndrome, with a 95 per cent confidence interval (CI) of 0.1-9.9. Cordero and Layde⁶ reported a comparatively precise POR of 1.2 (95% CI